

THREE NEW SPECIES OF *THRYPTICUS* FROM MARYLAND
(DIPTERA: DOLICHOPODIDAE)

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Abstract.—*Thrypticus deficiens*, *T. fosteri*, and *T. grogani* are described as new. All are from Maryland.

The genus *Thrypticus* has been most notable in the Dolichopodidae for the phytophagous nature of its larvae and the comparatively elusive nature of the rather small adults. It is also notable for some of the most widely distributed members of the family, including *T. fraterculus* (Wheeler), ranging from Siberia, through North America and Tropical America, south to Argentina. Thirty two species have been credited to the Western Hemisphere by Foote et al. (1965) and Robinson (1970), but twelve species, including seven previously undescribed, have been reported subsequently from the small island of Dominica in the Lesser Antilles (Robinson, 1975). There has been good reason to expect additional undescribed members of the genus from the Americas, but it is still somewhat surprising to obtain three such species recently collected in Maryland. The three specimens involved, each representing a separate undescribed species, were collected at Patuxent Wildlife Refuge in a Malaise trap maintained by William Grogan. The specimens were separated out by George Foster and given to me for study by F. C. Thompson.

Generic characteristics shared by all three new species include the face being metallic, the antenna having the three segments small and equal in size, the posterior slope of the mesoscutum being flattened, there being two setae on the outer surface of the hind coxa, the femora lacking preapical bristles, the fourth wing vein diverging from the second vein beyond the crossvein, and the sixth vein of the wing being completely absent. Other significant features of the new species are as follows.

Thrypticus deficiens H. Robinson, NEW SPECIES

Figs. 1, 2

Male.—Length 2 mm; wing 1.8 mm by 0.8 mm.

Setae of head brownish with pale reflections. Face $\frac{1}{2}$ as wide below as

width of antennal segment 1. Palpus and proboscis pale. Antenna yellowish brown.

Thorax as high as long; bright shining green, with little or no pollen; setae pale; with about 8 pairs of minute acrostichals, the rows with the posterior pairs diverging; dorsocentrals with 4 posterior pairs somewhat to greatly enlarged; scutellum with 2 large bristles, quite large seta on lateral margin.

Legs including coxae yellow; setae mostly pale. Tibia II with 1 or 2 minute apicals; tibia III with about 5 setae of distal $\frac{1}{2}$ to $\frac{2}{3}$ of posterodorsal series becoming more elongate; tibiae without other distinctive setae. Relative lengths of leg segments from base as: tibia I, 14; tarsus I, 6-3 $\frac{1}{2}$ -2 $\frac{1}{2}$ -1 $\frac{1}{2}$ -2 $\frac{1}{2}$; tibia II, 17; tarsus II, 8-5-3-2-1 $\frac{1}{2}$; tibia III, 22; tarsus III, 7-7-5-4-3.

Wing (Fig. 1) broadly oval, clear, veins pale. Vein 2 scarcely curving backward; vein 3 converging distally with vein 4, $\frac{3}{5}$ as far from vein 4 at tip as opposite crossvein; last of vein 4 nearly straight; crossvein perpendicular to last of vein 4, about $\frac{2}{5}$ as long as last of vein 5. Calypter and setae pale; halter white.

Abdomen with tergites metallic brownish green; sternites brownish; setae brownish with pale reflections. Hypopygium (Fig. 2) with stout tapering basal joint; small slightly flaring 2nd joint apparently representing capsule, ventral sheath not evident; disk as large as basal joint, with strongly convex white dorsal lamellae, upper surface of disk more brownish, lateral margins rounded, forming a slightly projecting rim, upper surface appearing smooth without projecting appendages.

Holotype.—♂, Patuxent Wildlife Refuge, Prince Georges County, Maryland, 13–16 May 1976. W. Grogan. Malaise trap. USNM type no. 76491.

Remarks.—The new species is named for the reduced condition of the hypopygium, having no obvious aedeagal sheath or other ornamentation on the ventral surface. A similar reduced hypopygium has been illustrated by Van Duzee (1915) for *T. aurinotatus* Van Duzee from the southeastern United States, but the latter species has a metallic golden reflection on the posterior slope of the mesoscutum and has much larger hypopygial appendages that are not as tightly appressed into a disk. The posterodorsal row of setae on the hind tibia of the new species is not very obvious, but it seems to be distinctive.

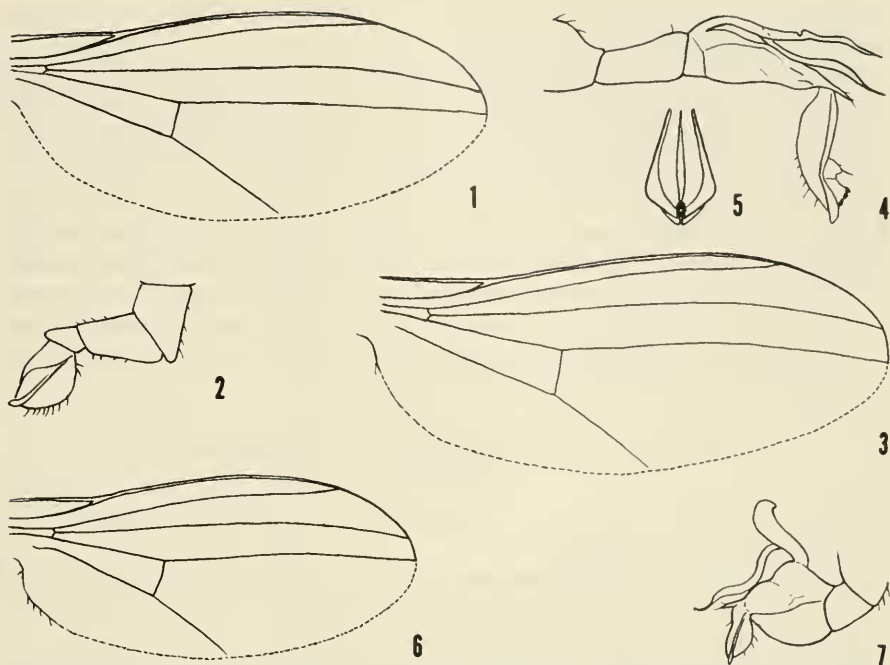
Thrypticus fosteri H. Robinson, NEW SPECIES

Figs. 3–5

Male.—Length 2.1 mm; wing 2.0 mm by 0.7 mm. Setae yellowish.

Face $\frac{1}{2}$ as wide below as width of antennal segment 1. Palpus yellow; proboscis brown. Antennal segments 1 and 2 yellow, segment 3 brown.

Thorax as high as long, shining metallic green dulled with slight yellowish pollen; acrostichals with 6 or 7 pairs, anterior 2 or 3 scarcely evident, rows not or scarcely diverging posteriorly; dorsocentrals with posterior 4 pairs



Figs. 1-2. *Thrypticus deficiens*. 1, Wing. 2, Hypopygium, lateral view. Figs. 3-5. *T. fosteri*. 3, Wing. 4, Hypopygium, lateral view. 5, Hypopygial appendages, dorsal view. Figs. 6-7. *T. grogani*. 6, Wing. 7, Hypopygium, lateral view.

somewhat to greatly enlarged; scutellum with 2 large bristles, minute seta on lateral margin.

Coxae II and III brownish on outer surface, legs otherwise yellow. Tibia II with minute apical bristle ventrally, tibiae without other distinctive bristles. Relative lengths of leg segments from base as: tibia I, 15; tarsus I, 10-5-3-1½-1½; tibia II, 17; tarsus II, 12-6-4-2-2; tibia III, 22; tarsus III, 6-9-4-2-broken.

Wing (Fig. 3) oval, clear, veins brownish. Vein 2 curving slightly backward, vein 3 and vein 4 not or scarcely closer at tips than opposite crossvein, curving slightly backward beyond crossvein; posterior crossvein perpendicular to base of vein 4, ½ as long as last of vein 5. Calypter and setae pale; halter white.

Abdomen with tergites metallic green; basal sternites yellowish brown, distal sternites darker brown. Hypopygium (Figs. 4, 5) brownish with slight greenish tinge, with elongate peduncle as long as the capsule, ventral sheath long and slender, extending beyond tip of the capsule; appendages other than ventral sheath tightly appressed into a compact obrhomboidal disk as

long as the capsule, disk mostly whitish, blackish area formed at clustered tips of inner appendages.

Holotype.—♂, Patuxent Wildlife Refuge, Prince Georges County, Maryland, 13–16 May 1976. W. Grogan. Malaise trap. USNM type no. 76492.

Remarks.—The species is named for George Foster who initially separated out the three specimens of *Thrypticus* described in this paper.

The new species is similar in general form to *Thrypticus muhlenbergiae* Johannsen and Crosby and *T. willistoni* (Wheeler), but it is distinct in the long and narrow form of all the parts of the hypopygium. The pedunculate portion of the hypopygium is almost as long as the capsule, and the disk formed by the appendages is also long. The disk is also of a distinctive shape, being rhomboidal with angulate rather than rounded margins and in having the widest part distinctly beyond the middle.

Thrypticus grogani H. Robinson, NEW SPECIES

Figs. 6, 7

Male.—Length 1.8 mm; wing 1.5 mm by 0.6 mm. Setae of head and thorax brownish with pale reflections.

Face narrowed in middle, becoming only as wide as width of antennal segment 1. Palpus brown; proboscis yellowish brown. Antennal segments 1 and 2 yellowish brown, segment 3 darker brown.

Thorax as high as long, metallic violet dulled with rather dense grayish pollen; acrostichals minute with 5 to 6 obvious pairs, rows diverging slightly in posterior pair; dorsocentrals with 4 posterior pairs somewhat to greatly enlarged; scutellum with 2 large bristles, without seta on lateral margin.

Coxae and bases of femora yellowish brown, tips of femora, tibiae and tarsi whitish. Tibia II with minute apical bristle ventrally; tibiae without other distinct setae. Relative lengths of leg segments from base as: tibia I, 9; tarsus I, 4-2-1½-1-1½; tibia II, 11; tarsus II, 6-3-1½-1½-1½; tibia III, 14; tarsus III, 3½-4-2½-1½-1½.

Wing (Fig. 6) broadly oval, clear, veins yellowish to hyaline. Vein 2 scarcely curved backward; vein 3 slightly converging with vein 4 distally; vein 4 curving very slightly backward beyond crossvein; crossvein perpendicular to base of vein 4, $\frac{2}{5}$ as long as last of vein 5. Calypter and setae pale; halter white.

Abdomen stout; tergites mostly metallic greenish violet, tergite 1 yellowish brown on the sides; sternites yellowish brown; setae whitish, very short. Hypopygium (Fig. 7) with short stout peduncle, capsule short and broad, brownish, castaneous dorsally; ventral sheath broad and truncate, indurated, castaneous; disk small, $\frac{1}{2}$ as long as capsule, compact with rounded lateral margins, rounded dorsally, brownish marginally, with appressed pale outer lamellae dorsally.

Holotype.—♂, Patuxent Wildlife Refuge, Prince Georges County, Maryland, 13–16 May 1976. W. Grogan. Malaise trap. USNM type no. 76493.

Remarks.—The species is named for the collector, William L. Grogan, Jr., of Salisbury State College, Salisbury, Maryland.

The new species does not show close relationship to any other known member of the genus. Distinctive characteristics include the rather obvious grayish pollen on the thorax and abdomen, the stout abdomen, the lack of a seta on the lateral margin of the scutellum, and especially the strongly indurated truncate aedeagal sheath on the hypopygium. The violet tinge of thorax and abdomen does not seem quite the same as the violet color seen in other members of the genus when they become dry and distorted.

LITERATURE CITED

- Foote, R. H., J. R. Coulson, and H. Robinson. 1965. Family Dolichopodidae, pp. 482–530. In Stone, A. et al., eds., A Catalog of the Diptera of America North of Mexico. U.S. Dep. Agric. Agric. Handb. 276, 1696 pp.
- Robinson, H. 1970. Family Dolichopodidae. Vol. 40, pp. 1–92. In Papavero, N., ed., A Catalogue of the Diptera of the Americas South of the United States. São Paulo, Secretaria da Agricultura.
- . 1975. Bredin-Archbold-Smithsonian Biological Survey of Dominica. The Family Dolichopodidae with some related Antillean and Panamanian species (Diptera). *Smithson. Contrib. Zool.* 185: 1–141.
- Van Duzee, M. C. 1915. Table of North American species of the dipterous genus *Thrypticus*, with descriptions of four new species. *Psyche* (Camb. Mass.) 22: 84–88.